REMARKS

Claims 1, 15 and 35 are currently amended to claim at least one panel, wherein the panel is comprised of the laminate, and a *wherein* clause has been added that claims how the panels form a collapsible tank. Claims 1 and 35 have been additionally amended to explicitly claim that the coating of thermoplastic resin is adhered to the fabric with the extruded adhesive. Claim 17 had a typographic error as did claim 21, and both were also amended. Claims 16, 36 and 37-39 are currently amended to reflect the changes in the parent claims. Claims 33-34 had previously been cancelled. Pending claims are 1-32 and 35-39.

The Examiner states on page 2 "Applicant's arguments with respect to the prior art rejections of claims 8-10, 12, 22-24, 26 and 29-32 are found persuasive. Specifically the prior art made of record fails to teach the claimed hydrolytic stabilizer and cross-linking enhancer". In the subsequent rejections claims 8-10, 12, 22-24, 26 and 29-32 are conspicuously not rejected and not addressed. These claims should either be identified as allowable or rejected. Applicant believes the former status more appropriate in light of the current amendments.

The Examiner has issued a provisional double patenting rejection, stating that a terminal disclaimer has not been received. The current application is the parent of the child application 10/739361, and on February 17th of 2006 the Examiner logged in Applicant's 10/739361 terminal disclaimer disclaiming the 10/723,145 (the instant application). A terminal disclaimer is not necessary at this time. Furthermore, 10/739361 claims a solvent activated patch system, and this application (10/723,145) claims a laminate system

comprised of a panel that is a laminate of thermoplastic resin adhered with an extruded adhesive having a latent thermally activated curing component to a fabric. Therefore, there doesn't appear to be a need for a terminal disclaimer. Applicant requests the Examiner to revisit this request.

Claims 15-16, 25, 27 and 28 stand rejected under 35 USC 102(b) as being anticipated by Morikawa et al., US patent 6,309,507. Claim 15 comprises panels for forming a collapsible tank, where the panels are a laminate comprised of a coating of a mixture of a thermoplastic resin and adhesive that is adhered to a fabric. Morikawa'507 doesn't have a counterpart to the panels. Additionally, claim 15 claims an extruded mixture. Morikawa'507 doesn't teach an extruded mixture. Claim 16 reads on a compression press, and Morikawa'507 doesn't teach the utility of a heated compression press to assemble panel into a collapsible tank and the like. A compression press is germane, as it teaches what is required for effecting fusion of the panels. As this is a "system" claim, a member of the system for fusing the panels is an element of the system, not a method as the Examiner has stated. Claims 25, 27 and 28 depend from claim 15, and are therefore also not anticipated. The rejection to claims 15-16, 25, 27 and 28 is respectfully overcome in light of the amendment. The Examiner in considering the rejection is reminded that Morikawa'507 in col.10 lines 34-35 teaches that "[the film] is allowed to stand for a certain period of time and then is laminated'. No delay is required for Applicant's invention. The Morikawa'507 reference to nonwoven fabrics does not teach coating an extruded adhesive that has a latent thermally activated compound, and none of the cited examples include a collapsible tank. Just as soon as Morikawa'507 applies his coating the curing process begins. There is no teaching of a delayed or latent cure. Morikawa teaches that the cure is at 40° C (104° F) for three days.

Claims 1-7, 11, 13-14, 17-21 and 35-38 stand rejected under 36 U.S.C. 103(a) as being unpatentable over Ohya et al. US Patent 4,567,090 in view of Morikawa et al. US patent 6,309,507. The Examiner, discussing Applicant's arguments, states that "while Morikawa et al does not teach uretdiones in a solventless composition, Applicant is not claiming a blocked isocyanate or solventless composition." The Examiner is incorrect for the following reasons. A latent thermally activated curing component (i.e. a uretdione) is a "blocked isocyanate", and this is taught in the specification on page 7, lines 10-11. Therefore, the latent thermally activated curing component would encompass a blocked isocyanate. An extruded adhesive is well known in the art as a melted composition that is substantially 100% solids. Applicant has included US Patent Re. 36,855 to Bredahl et al. that reads on an extruded adhesive. The Applicant is confident that the Examiner will now agree that an extruded adhesive (col. 4, line 66) has a composition that is solvent free (col. 3, lines 54-54), and therefore is substantially a solventless composition. A principal reason for employing an extruded adhesive is to eliminate solvent. Therefore, the Examiner does not have to infer that an extruded adhesive is solventless, it is solventless by virtue of being extruded. Liquid components in extrusion coatings are called plasticizers. Furthermore, the Applicant is claiming a laminate comprised of a thermoplastic resin coated on an adhesive that is coated on a fabric. Ohya teaches a gas barrier vinylidene chloride (D), which has an adhesive layer on both sides (C), which has a modified polyolefin layer on both sides (B), which has a polypropylene layer on both sides (A), end up with A/B/C/D/C/B/A. Ohya does not teach a fabric layer, so there is no teaching of combining a fabric with an extruded thermoplastic resin. Furthermore, if Ohya did combine the 7 layer laminate with a fabric the product would be so stiff as to be useless for a collapsible tank. The Examiner states that

Applicant doesn't limit the number the number of layers, and so could have as many as 7. The Applicant does claim an order of combination of fabric, adhesive and thermoplastic resin, while Ohya teaches that the adhesive is combined to vinylidene chloride on one side and a modified polyolefin layer on the other. The order is different. Examiner states that Ohya teaches the use of a heat resistant film laminate suitable for use in food packaging that exhibits excellent gas-barrier and adhesive properties and the capability of enduring retort treatment at high temperatures. Applicant's invention relies on the capability of being able to fuse panels of the laminate forming high strength seams. Applicant does not follow the relevance of Examiner's recitation of art that is an excellent "heat resistant film laminate suitable for use in food packaging that exhibits excellent gas-barrier and adhesive properties". Heat sealing on packaged can easily be peeled away, and in no way is comparable to forming a fused bond with 25 lbs/in peel force as claimed in claims 37-39. The tear strength of Ohya's film is probably less than the peel strength of the Applicant's invention. Certainly the strength of Morikawa examples is much less, as is discussed below.

In claims 2, 16 and 36 Applicant claims a compression press. The cited references do not teach a compression press. There is no counter part in cited art.

In claims 1 and 35, a uretdione is explicitly claimed, and while Morikawa mentions uretdiones, they are only used in the context of reactive polyisocyanates, and they are consumed (col. 11, line 54) during preparation of the curing agent. Morikawa does not teach that uretdiones can be used as blocked isocyanates in a solventless composition. Morikawa teaches that his cure system cures at 40° C in just three days. A blocked isocyanate requires more heat to thermally activate it. In the dependent claim 4, the thermoplastic resin is a thermoplastic polyurethane resin. Neither Ohya nor Morikawa teach a laminate with a thermoplastic polyurethane resin layer. Furthermore, in claims 2, 16 and

36, the panels of the heat curable extruded adhesive laminate are heated to a temperature from about 260°F to about 350°F in a compression press, thereby forming collapsible tanks. The compression press fuses the panels and activates the latent cure. Neither Ohya nor Morikawa teach anything remotely similar. Neither Ohya nor Morikawa teach an adhesive having medium to a high level of cyrstallinity, and as a rule it is undesirable for an adhesive to have a high level of cyrstallinity, because when the Tg is high, the adhesive is hard. Hard adhesives can be very poor adhesives, because they do not wet the substrate they are adhering. In the intended application, during the compression and heating, the layer of fabric, a layer of adhesive, and a layer of thermoplastic resin fuse into substantially a single material that is a composite, with the cured adhesive distributed in the thermoplastic resin. The resulting material is flexible. With regard to claim 5 and the Examiner's position that cyrstallinity is inherent in the polyurethane taught by the prior art, and that hydroxyl groups have a medium cyrstallinity, the Applicants have no knowledge of this correlation. Other factors dominate. For instance, Morikawa teaches the use polyoxyalkylene ether polyols. If the polyoxyalkylene ether polyol is based on ethylene oxide, then there is a lot of cyrstallinity, if the polyoxyalkylene ether polyol is based on propylene oxide then there is almost no cyrstallinity. The two polyols have the same number of hydroxyl groups, but in the case of the propylene oxide based polyol, the methyl group prevents crystallization, while there is no methyl group to prevent crystallization of the polyethylene oxide polyol. If the Examiner is giving Official Notice, then the Examiner must state so, otherwise the Examiner is merely expressing his / her opinion, which, while it might be accurate for sugars and starches, is inaccurate for thermoplastic urethanes.

With regard to claims 37 and 38, the Examiner admits that the prior art does not teach the performance of seams after heating, but opines it is reasonable to expect that the claimed performance would be present in the heat resistant laminate formed by the prior art.

The Applicants contend that Examiner has reached a conclusion not supported by the referenced prior art. The prior art teaches laminates that are substantially cured upon completion of the lamination process or followed by a low temperature cure over several days. There is no second step of compression and heating, which fuses one panel of the laminate to another panel of the laminate. The second step kicks off the latent thermal cure and enables the adhesive (with the latent thermal cure) and the thermoplastic resin to melt, flow and fuse, and permitting the fabrics of the panels to move into contact - becoming substantially reinforced. Furthermore, Ohya nor Morikawa teach the use of urethanes to bond essentially dissimilar films. For instance, in Ohya, the urethane adhesive (C) is used to bond a polyolefin adhesive layer (B) to a copolymer of vinylidene chloride layer (D). In Morikawa, the urethane adhesive is used to bond a PET layer to a aluminum foil. Morikawa teaches that the cure is at 40° C (104° F) for three days. Contrast those conditions against Applicants cure conditions of 260° F to about 350° F, while under compression, as claimed in claims 2, 16 and 36. Morikawa attains bond strengths in Table 4 of 1200 grams force /15 mm. This is about 4.4 lbs/in. Applicants attain bond strengths of 25 lbs/in, after being immersed in water and /or fuel at 160° F for six weeks. Clearly, Applicants have attained superior properties that are not taught by the prior art. The rejections of claims 1-7, 11, 13-14, 17-21 and 35-38 are respectfully traversed.

Claims 29 and 30 are not rejected. The Examiner admits that there is no teaching by the reference to N,N,N',N'-tetrakis(2-hydroxyethyl)adipamide or N,N,N',N'-tetrakis(2-hydroxypropyl)adipamide. These claims should have been identified as allowable.

There are no new claims or fees.

Examiner is encouraged to please either allow the amended claims as drafted, or identify what is allowable. In view of the foregoing amendment and these remarks, this application is now believed to be in condition for allowance and such favorable action is respectfully requested on behalf of the Applicant.

Respectfully submitted,

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